

COMPUTATIONAL THINKING

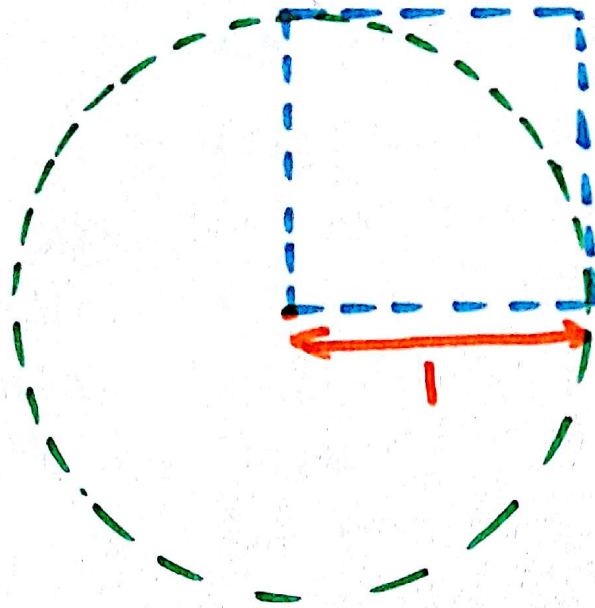
- SOLVE THE FOLLOWING PROBLEMS (COMPUTATIONAL MEANS).

① TWO DRUNKS START OUT TOGETHER AT THE ORIGIN, EACH HAVING EQUAL PROBABILITY OF MAKING A STEP TO THE LEFT OR RIGHT ALONG THE X-AXIS. FIND THE PROBABILITY THAT THEY MEET AGAIN AFTER N STEPS. IT IS TO BE UNDERSTOOD THAT THE MEN MAKE THEIR STEPS SIMULTANEOUSLY.

RELATED QUESTIONS :

- ⇒ WHAT IS THE PROBABILITY FOR A DRUNK TO BE AT THE ORIGIN AFTER TAKING N STEPS?
- ⇒ MEAN DISPLACEMENT OF THE DRUNK ?
- ⇒ MEAN SQUARE DISPLACEMENT OF THE DRUNK ?

- ② CONSIDER A UNIT CIRCLE AND A UNIT SQUARE AS SHOWN IN THE FIGURE.



YOU HAVE BEEN GIVEN N POINT PEBBLES.
HOW DO YOU DETERMINE THE VALUE OF
 π USING THESE INPUTS?
WRITE A CODE TO DETERMINE THE
VALUE OF ~~π~~ π .